

WHAT IS CLAIMED IS:

1. A signal output method comprising:

providing a write permission signal including a repetition of a write enable interval and a pause interval;

providing a write data signal to be output during the write enable interval;

outputting a write signal including the write permission signal and the write data signal; and

writing information to an optical information recording medium by using the write signal,

wherein Tf_{\max} denotes an output interval of a first write data signal among write data signals corresponding to a write permission signal immediately subsequent to a pause interval of the write signal in a case in which the pause interval of the write signal is a maximum,

Tf_{\min} denotes an output interval of a first write data signal among the write data signals corresponding to a write permission signal immediately subsequent to the pause interval of the write signal in a case in which the pause interval of the write signal is a minimum,

T denotes a reference period, and

wherein the write signal is outputted so that Tf_{\max} , Tf_{\min} and T satisfy the following formula (1):

Formula (1): $Tf_{\max} - Tf_{\min} \geq 0.01T$.

2. A signal output method according to claim 1, wherein the write signal is outputted so that Tf_{\max} , Tf_{\min} and T satisfy the following formula:

$$0.4T \geq Tf_{\max} - Tf_{\min} \geq 0.06T.$$

3. A signal output method according to claim 1, wherein the write signal is outputted so that Tf_{\max} , Tf_{\min} and T satisfy the following formula:

$$Tf_{\max} - Tf_{\min} = 0.25T.$$

4. A signal output method according to claim 1, wherein the write signal is outputted so that Tf_{\max} , Tf_{\min} and T satisfy the following formula:

$$Tf_{\max} - Tf_{\min} = 0.15T.$$

5. A signal output method according to claim 1, wherein the write signal is outputted so that Tf_{\max} , Tf_{\min} and T satisfy the following formulae:

$$1.8T \geq Tf_{\max} \geq 0.5T$$

$$1.8T \geq Tf_{\min} \geq 0.5T.$$

6. A signal output method according to claim 1, wherein the write signal is outputted so that Tf_{\max} , Tf_{\min} and T satisfy the following formulae:

$$1.5T \geq Tf_{\max} \geq 0.7T$$

$$1.5T \geq Tf_{\min} \geq 0.7T.$$

7. A signal output method according to claim 1, wherein when T_{mp} denotes an output interval of each write data signal except the first and the last write data signals among the write

data signals, the write signal is outputted so that T_{mp} and T satisfy the following formula:

$$0.84T \geq T_{mp} \geq 0.4T.$$

8. A signal output method according to claim 1, wherein when T_{mp} denotes an output interval of each write data signal except the first and the last write data signals among the write data signals, the write signal is outputted so that T_{mp} and T satisfy the following formula:

$$0.78T \geq T_{mp} \geq 0.6T.$$

9. A signal output method comprising:

providing a write permission signal including a repetition of a write enable interval and a pause interval;

providing a write data signal to be output during the write enable interval;

outputting a write signal including the write permission signal and the write data signal; and

writing information to an optical information recording medium by using the write signal,

wherein $T_{l_{max}}$ denotes an output interval of a last write data signal among write data signals corresponding to a write permission signal immediately preceding a pause interval of the write signal in a case in which the pause interval of the write signal is a maximum,

$T_{l_{min}}$ denotes an output interval of the last write data signal among the write data signals corresponding to a write

permission signal immediately preceding the pause interval of the write signal in a case in which the pause interval of the write signal is a minimum,

T denotes a reference period, and

wherein the write signal is outputted so that Tl_{\max} , Tl_{\min} and T satisfy the following formula (2):

$$\text{Formula (2): } Tl_{\min} - Tl_{\max} \geq 0.01T.$$

10. A signal output method according to claim 9, wherein the write signal is outputted so that Tl_{\max} , Tl_{\min} and T satisfy the following formula:

$$0.4T \geq Tl_{\min} - Tl_{\max} \geq 0.06T.$$

11. A signal output method according to claim 9, wherein the write signal is outputted so that Tl_{\max} , Tl_{\min} and T satisfy the following formula:

$$Tl_{\min} - Tl_{\max} = 0.25T.$$

12. A signal output method according to claim 9, wherein the write signal is outputted so that Tl_{\max} , Tl_{\min} and T satisfy the following formula:

$$Tl_{\min} - Tl_{\max} = 0.15T.$$

13. A signal output method according to claim 9, wherein the write signal is outputted so that Tl_{\max} , Tl_{\min} and T satisfy the following formulae:

$$0.9T \geq Tl_{\max} \geq 0.2T$$

$$0.9T \geq Tl_{\min} \geq 0.2T.$$

14. A signal output method according to claim 9, wherein

the write signal is outputted so that Tl_{\max} , Tl_{\min} and T satisfy the following formulae:

$$0.7T \geq Tl_{\max} \geq 0.3T$$

$$0.7T \geq Tl_{\min} \geq 0.3T.$$

15. A signal output method according to claim 9, wherein when T_{mp} denotes an output interval of each write data signal except first and last write data signals among write data signals, the write signal is outputted so that T_{mp} and T satisfy the following formula:

$$0.84T \geq T_{mp} \geq 0.4T.$$

16. A signal output method according to claim 9, wherein when T_{mp} denotes an output interval of each write data signal except first and last write data signals among write data signals, the write signal is outputted so that T_{mp} and T satisfy the following formula:

$$0.78T \geq T_{mp} \geq 0.6T.$$

17. A signal output method according to claim 9, wherein

Tf_{\max} denotes an output interval of a first write data signal among write data signals corresponding to a write permission signal immediately subsequent to a pause interval of the write signal in the case in which the pause interval of the write signal is the maximum,

Tf_{\min} denotes an output interval of a first write data signal among the write data signals corresponding to a write permission signal immediately subsequent to a pause interval

of the write signal in the case in which the pause interval of the write signal is the minimum, and

wherein the write signal is outputted so that Tf_{\max} , Tf_{\min} and T satisfy the following formula (1):

$$\text{Formula (1): } Tf_{\max} - Tf_{\min} \geq 0.01T.$$

18. An optical information recording medium having information recorded thereon by using a signal output method, the signal output method comprising:

providing a write permission signal including a repetition of a write enable interval and a pause interval;

providing a write data signal to be output during the write enable interval;

outputting a write signal including the write permission signal and the write data signal; and

writing information to an optical information recording medium by using the write signal,

wherein Tf_{\max} denotes an output interval of a first write data signal among write data signals corresponding to a write permission signal immediately subsequent to a pause interval of the write signal in a case in which the pause interval of the write signal is a maximum,

Tf_{\min} denotes an output interval of a first write data signal among the write data signals corresponding to a write permission signal immediately subsequent to the pause interval of the write signal in a case in which the pause interval of

the write signal is a minimum,

T denotes a reference period, and

wherein the write signal is outputted so that Tf_{\max} , Tf_{\min} and T satisfy the following formula (1):

Formula (1): $Tf_{\max} - Tf_{\min} \geq 0.01T$.

19. An optical information recording medium according to claim 18, wherein information can be recorded thereon by using a laser beam having a wavelength in the range of 350 nm to 500 nm.

20. An optical information recording medium according to claim 18, wherein the optical information recording medium is a write once type and a dye type.

21. An optical information recording medium having information recorded thereon by using a signal output method, the signal output method comprising:

providing a write permission signal including a repetition of a write enable interval and a pause interval;

providing a write data signal to be output during the write enable interval;

outputting a write signal including the write permission signal and the write data signal; and

writing information to an optical information recording medium by using the write signal,

wherein Tl_{\max} denotes an output interval of a last write data signal among write data signals corresponding to a write

permission signal immediately preceding a pause interval of the write signal in a case in which the pause interval of the write signal is a maximum,

$T_{l_{min}}$ denotes an output interval of the last write data signal among the write data signals corresponding to a write permission signal immediately preceding the pause interval of the write signal in a case in which the pause interval of the write signal is a minimum,

T denotes a reference period, and

wherein the write signal is outputted so that $T_{l_{max}}$, $T_{l_{min}}$ and T satisfy the following formula (2):

Formula (2): $T_{l_{min}} - T_{l_{max}} \geq 0.01T$.

22. An optical information recording medium according to claim 21, wherein information can be recorded thereon by using a laser beam having a wavelength in the range of 350 nm to 500 nm.

23. An optical information recording medium according to claim 21, wherein the optical information recording medium is a write once type and a dye type.